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PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION

Improvements in or relating to Portable Winders for Fire and like Hose Pipes

I, JAMES CRADDOCK HINTON, a British Subject, of Town-Hall Garage, Dalton Square, Lancaster, do hereby declare the nature of this invention to be as follows:—

This invention relates to portable winders for fire and like hose pipes of the type (hereinafter referred to as the type described) comprising a base plate on which is mounted a manually-rotatable drum on which the fire hose or the like is to be wound, which drum has holding means for detachably holding the usual coupling member provided on the end of the pipe.

The present invention has for its main object to provide an improved construction of portable hose winder of the type described, by means of which a fire or like hose pipe, hereinafter referred to generally as a fire hose, can be wound up more neatly and more conveniently than heretofore, and which is adapted to be mounted on a vertical support, such as the side of a lorry or other vehicle used for fire fighting, and can be manufactured at a low cost.

According to the invention there is provided a portable winder of the type described, whereof the body portion of the drum around which the fire hose is wound is eccentric to the axis of rotation of the drum. The purpose of this arrangement is to leave at one side of the drum body a space for accommodating close to it the coupling member around which the hose will be wound in a circular form.

Conveniently, the body portion of the drum comprises two longitudinal plates held by the end members of the drum in spaced parallel relation and facing one another at opposite sides of the axis of rotation, with the central plane that passes longitudinally through the middle of each bar lying along a chord of the drum as viewed in end elevation.

Preferably, the drum has at its end flanges, and one flanged end member of the drum is readily detachable.

Lugs on the body portion of the drum may extend through the detachable end

member, and one or more cotter pins, preferably spring-pressed, may extend through holes in the lugs outside the detachable member and hold it in position.

A flange provided by each end member of the drum may have an aperture for receiving a lug, pin or like projection on the coupling member of the hose, and each flange may carry on the outside a preferably circular casing into which the aperture opens, for receiving a hose clip or a part thereof.

According to one method of carrying the invention into practice, a rectangular longitudinal base plate of T-section to be secured to a vertical support, has a central longitudinal web, at the ends of which are two bearings, one for the drum spindle and the other for a presser-member spindle. The drum comprises two circular end members, whereof one is fixed coaxially to the spindle, and eccentrically carries one end of two longitudinal plates of the body portion arranged as set forth above. The opposite ends of these plates have perforated lugs which extend through apertures in the other end member, which is detachable. Two spring-pressed bolts slidable on the outside of the detachable member are arranged to enter holes in the lugs. A handle member is also detachably carried by this detachable end member, by means of a tubular socket into which it is slidable endwise.

The outer marginal portion of each end member constitutes a flange, and these flanges have two apertures situated opposite one another for receiving clips or parts thereof on a coupling member. A cup-shaped protective casing is fixed on the outside of each flange at its aperture, the arrangement being such that when the usual coupling member is in position on the drum, the axis of rotation of the drum lies substantially midway between the outer end of the coupling member and the opposite side of the drum body, which ensures that when the hose is wound up around the drum body and the coupling member, a substantially circular coil

results in having its centre lying, not as heretofore, at the middle of the coupling member, but at one side thereof.

A presser member, preferably of U-shape, for pressing and smoothing the hose as it is being wound, has one end pivoted on the base plate to swing about an axis that lies parallel with the axis of rotation of the drum, and is remote from the latter, and has its other end arranged to bear on a portion of the hose that is being wound adjacent the drum. The pressing end of this presser member is preferably adjustable in width for accommodating various sizes of hose, and may carry two shoes arranged to lie at opposite sides of the hose, one of which shoes is adjustable in relation to the other, by means of a pin-and-slot connection of the adjustable shoe with its support.

A cleaning device may be arranged to clean the hose while it is being wound, and may comprise one or more brushes

arranged to contact with the hose during the winding operation. Conveniently, two brushes are arranged to lie at opposite sides of the hose, one of which brushes may be carried by the pivoted end of the presser member at the side of its pivot remote from its pressing end, and the second brush being pivotally mounted on the presser member to rock about an axis situated between the pressing end of the presser member and its pivotal axis. By pressing on the second brush during the winding operation, not only is the presser member forced against the hose to smooth it, but the unwound portion of the hose is passed between the two brushes which constitute two jaws of the cleaning device.

Dated this 13th day of November, 1939.

BOULT, WADE & TENNANT,

111 & 112, Hatton Garden,

London, E.C.1,

Chartered Patent Agents.

COMPLETE SPECIFICATION

Improvements in or relating to Portable Winders for Fire and like Hose Pipes

I, JAMES CRADDOCK HINTON, a British Subject, of Town-Hall Garage, Dalton Square, Lancaster, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to portable winders for fire and like hose pipes of the type (hereinafter referred to as the type described) comprising a base plate on which is mounted a manually-rotatable drum on which the fire hose or the like is to be wound, which drum has holding means for detachably holding the usual coupling member or like fitting provided on the end of the pipe.

The present invention has for its main object to provide an improved construction of portable hose winder of the type described, by means of which a fire or like hose pipe, hereinafter referred to generally as a fire hose, can be wound up more neatly and more conveniently than heretofore, and which is adapted to be mounted on a vertical support, such as the side of a lorry or other vehicle used for fire fighting, and can be manufactured at a low cost.

According to the invention there is provided a portable winder of the type described, whereof the body portion of the drum around which the pipe is wound is eccentric to the axis of rotation of the drum. The purpose of this arrangement

is to leave at one side of the drum body a space for accommodating close to it the coupling member or like fitting around which the hose pipe will be wound in a circular form.

Conveniently, the body portion of the drum comprises two longitudinal plates held by the end members of the drum in spaced parallel relation and facing one another at opposite sides of the axis of rotation, with the central plane that passes longitudinally through the middle of each bar lying along a chord of the drum as viewed in end elevation.

Preferably, the drum has at its ends flanges, and one flanged end member of the drum is readily detachable.

Lugs on the body portion of the drum may extend through the detachable end member, and one or more cotter pins, preferably spring-pressed, may extend through holes in the lugs outside the detachable end member and hold it in position.

A flange provided by each end member of the drum may have an aperture for receiving a lug, pin or like projection on a fitting on the end of the pipe, and each flange may carry on the outside a preferably circular casing into which the aperture opens, for receiving a hose pipe clip or a part thereof.

A presser member and a cleaning device which may be provided on the hose winder will be described hereinafter.

One embodiment of the invention is diagrammatically illustrated by way of example in the accompanying drawings, wherein:—

5 Figure 1 is a front side elevation showing one form of portable winder according to the invention, and

Figure 2 is a top plan view thereof.

Like reference characters designate 10 like parts in both views.

Referring to the drawings, a rectangular longitudinal base plate 10 of T-section to be secured to a vertical support, such as the side wall of a vehicle indicated by the broken line 11, has a central longitudinal web 12, at the ends of which are two bearings 14, 16, whereof the bearing 14 supports a spindle 18 of a drum designated generally 20, and the bearing 20 16 supports a spindle 22 of a presser member 24. The drum 20 comprises two circular end members 26, 28 in the form of discs whereof the disc 26 is fixed coaxially to the spindle 18, and eccentrically carries one end of two longitudinal plates 30, 32 forming the body portion of the drum. These plates 30, 32 are mounted in spaced parallel relation and face one another at opposite sides of the axis of rotation of the drum indicated at 34, with the central plane that passes longitudinally through the middle of each bar lying along a chord of the drum as viewed in end elevation. The 35 opposite ends of these plates 30, 32 having perforated lugs 36, 38 respectively, which extend through apertures at 40 and 42, respectively, in the other disc 28, which is detachable. Two spring-pressed bolts 44, constituting cotter pins, one allotted to each lug, are slidable each in a tubular guide 46 formed outside the disc 28, which bolts 44 are arranged each to enter a hole in one of the lugs. Each 45 bolt 44 carries a pin 48 that extends through a slot in the guide 46, by means of which pins the bolts can be retracted for removing the disc 28 when it is desired to do so. A handle member 50 50 is detachably carried by this detachable end disc 28, by means of a tubular socket 52 into which it is slidable endwise.

The outer marginal portion of each end member 26, 28 constitutes a flange, and 55 these flanges have two apertures at 54 situated opposite one another for receiving clips or parts thereof in the form of pins on a coupling member of a hose pipe indicated in broken lines at 56 to be 60 wound on the drum. A cup-shaped protective casing 58 is fixed on the outside of each flange at its aperture 54, the arrangement being such that when the usual coupling member of a fire hose pipe 65 is in position on the drum, the axis of

rotation of the drum lies substantially midway between the outer end of the coupling member and the opposite side of the drum body, which ensures that when the hose pipe is wound up around the drum body and the coupling member which will lie at the right hand side of the drum body as viewed in Figure 2, a substantially circular coil will result having its centre lying, not as heretofore at the middle of the coupling member, but at one side thereof.

The presser member 24 is of U-shape and serves for pressing and smoothing the hose pipe as it is being wound; this member has one end pivoted to swing about the spindle 22 whereof the longitudinal axis lies parallel with the axis of rotation 34 of the drum. The other end 59 of the presser member is arranged to bear on a portion of the hose pipe that is being wound adjacent the drum. This end part 59 of the presser member is adjustable in width for accommodating various sizes of hose, and carries at one side an adjustable shoe 60 by means of a pin-and-slot connection comprising a nut-equipped pin 62 movable in a slot 64 formed in the end part 59 of the presser member. This shoe is thus adjustable in relation to the opposite side of the presser member.

A cleaning device may be arranged to clean the hose pipe while it is being wound. As illustrated, such a cleaning device comprises two brushes 66, 68, 100 whereof the brush 68 is carried by the pivoted end of the presser member 24 at the side of its pivot remote from its pressing end, and the stem 70 of the brush 66 is pivotally mounted at 72 to rock about an axis situated between the pressing end of the presser member and its pivotal axis. A handle member in the form of a grip 74 is provided on the stem 70, and by pressing the brush 66 during the winding operation, not only is the presser member 24 forced against the hose pipe to smooth it, but the unwound portion of the hose pipe is passed between the two brushes which constitute two jaws of the 115 cleaning device.

The described portable winder may be mounted in any convenient manner on a support, such as the side of a vehicle. As illustrated, the back plate 10 is 120 dropped into two vertically arranged hooks 76 which can be fixed to the support, each of which pivotally carries at 77 a manually-operable fastening device 78 whereof the end 80 is arranged to hold 125 the back plate 10 against the hook 76.

Various modifications may be made in the details of construction described above without departing from the invention. For example, in some cases the presser 130

member and cleaning device may be dispensed with. Also, the two bolts 44 may be substituted by a single pin, e.g. a split pin, inserted through the lugs 36, 38.

5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

10 1. A portable winder of the type described, wherein the body portion of the drum, around which the pipe is wound, is eccentric to the axis of rotation of the drum.

15 2. A winder according to claim 1, wherein the body portion of the drum comprises two longitudinal plates held by the end members of the drum in spaced parallel relation and facing one another at opposite sides of the axis of rotation, with the central plane that passes longitudinally through the middle of each bar lying along a chord of the drum as viewed in end elevation.

25 3. A winder according to claim 1 or claim 2, wherein the drum has at its ends flanges, and one flanged end member of the drum is readily detachable.

30 4. A winder according to claim 3, wherein lugs on the body portion of the drum extend through the detachable end member, and one or more cotter pins, preferably spring-pressed, extend through holes in the lugs outside the end member and hold it in position.

35 5. A winder according to claim 3 or claim 4, wherein a flange provided by each end member of the drum has an aperture for receiving a lug, pin or like projection on a fitting on the end of the pipe.

40 6. A winder according to claim 5, wherein each flange on the drum carries on the outside a preferably circular casing, into which the aperture opens, for receiving a hose pipe clip or a part thereof.

45 7. A winder according to any of the preceding claims, wherein a presser member, preferably of U-shape, has one

end pivoted on the base plate to swing about an axis that lies parallel with the axis of rotation of the drum, and is remote from the latter, and has its other end arranged to bear on a portion of the pipe that is being wound adjacent the drum.

8. A winder according to claim 7, wherein the pressing end of the presser member is adjustable in width for accommodating various sizes of pipe.

9. A winder according to claim 7 or claim 8, wherein the pressing end of the presser member carries at one side a shoe that is adjustable in relation to the opposite side.

10. A winder according to any of the preceding claims, wherein a cleaning device is arranged to clean the pipe while it is being wound.

11. A winder according to claim 10, wherein the cleaning device comprises one or more brushes arranged to contact with the pipe that is being wound.

12. A winder according to claim 11, wherein two brushes are arranged to lie at opposite sides of the pipe.

13. A winder according to any of the preceding claims 10 to 12, wherein the cleaning device is carried by the pressing member.

14. A winder according to claims 7 and 13, wherein the cleaning device comprises one brush carried by the pivoted end of the presser member at the side of its pivot remote from its pressing end, and a second brush is pivoted on the presser member to rock about an axis situated between the pressing end of the presser member and its pivotal axis.

15. A portable winder according to claim 1, with or without a pivoted presser member combined with a cleaning device, as shown in the accompanying drawings.

Dated this 18th day of June, 1940.

BOULT, WADE & TENNANT,

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[This Drawing is a reproduction of the Original on a reduced scale.]

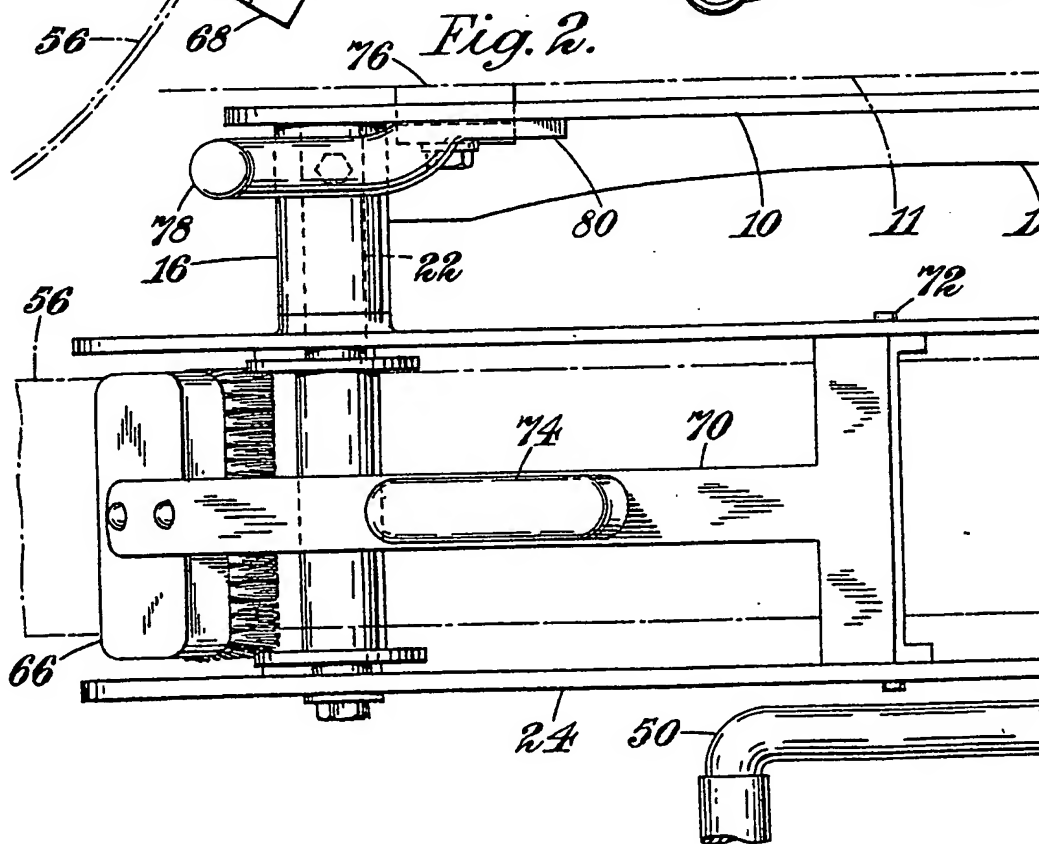
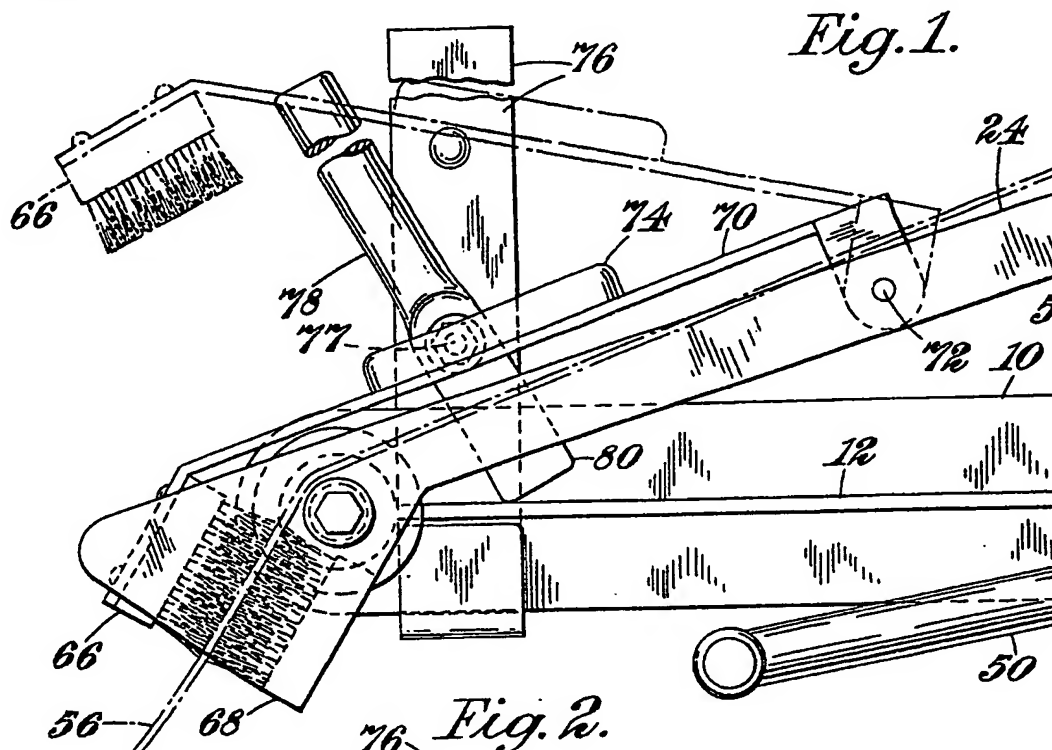
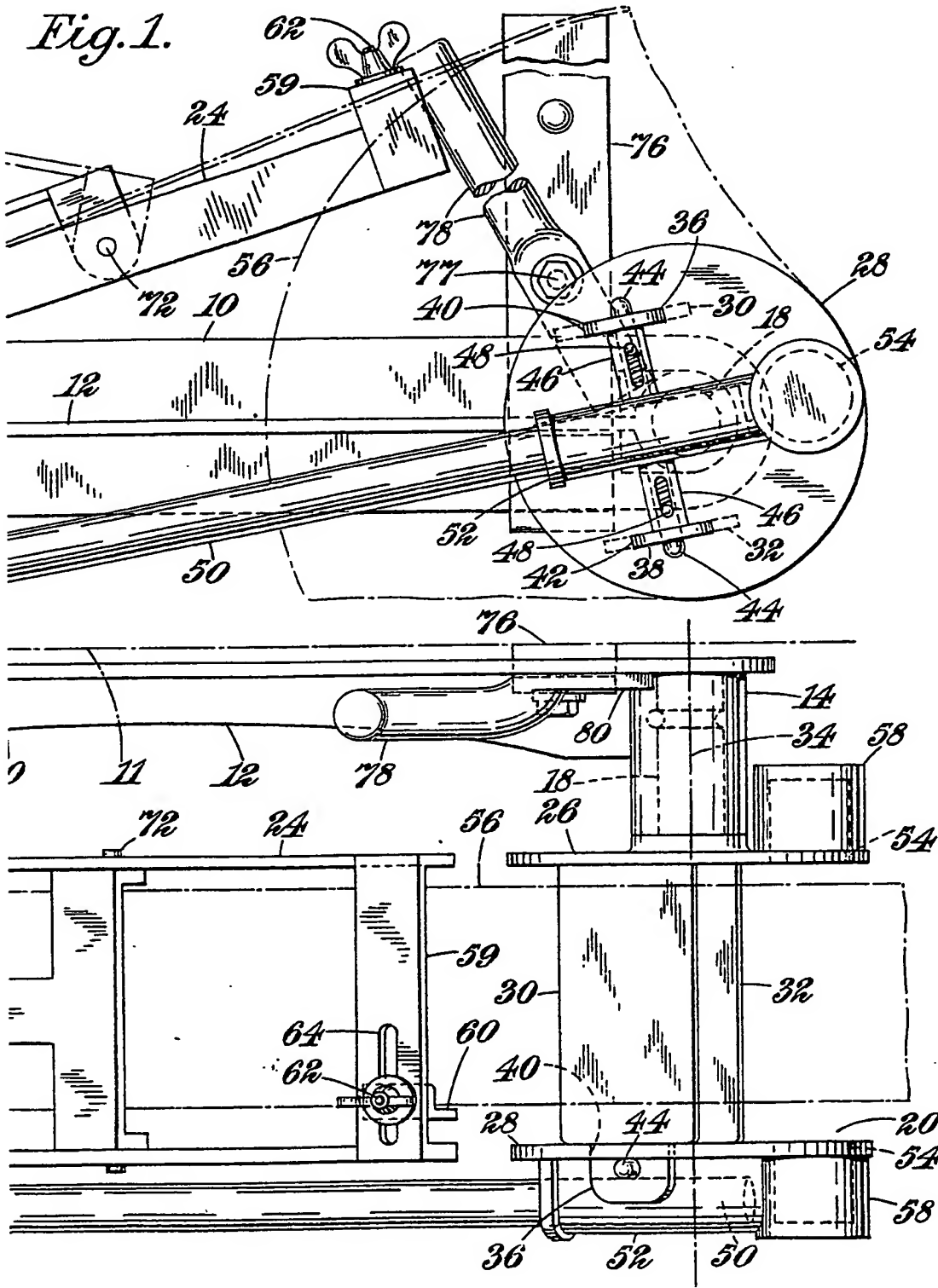


Fig. 1.



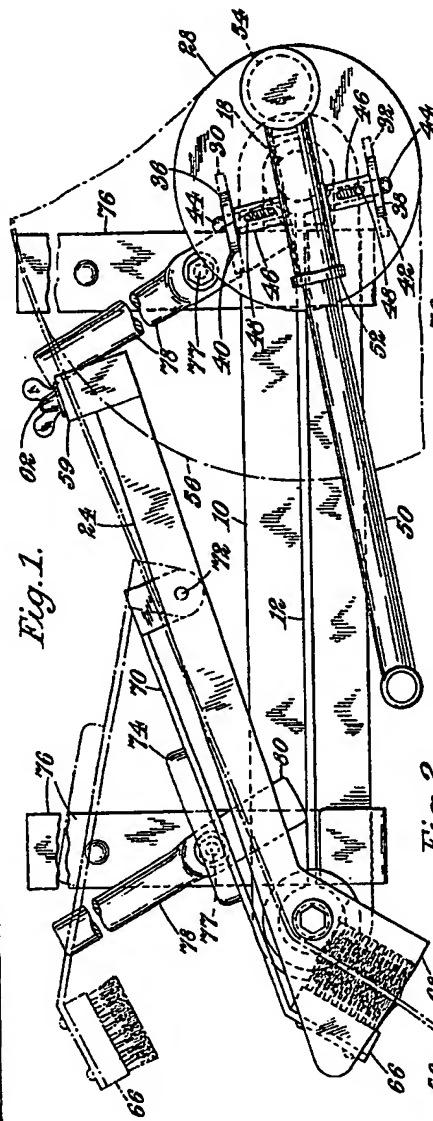
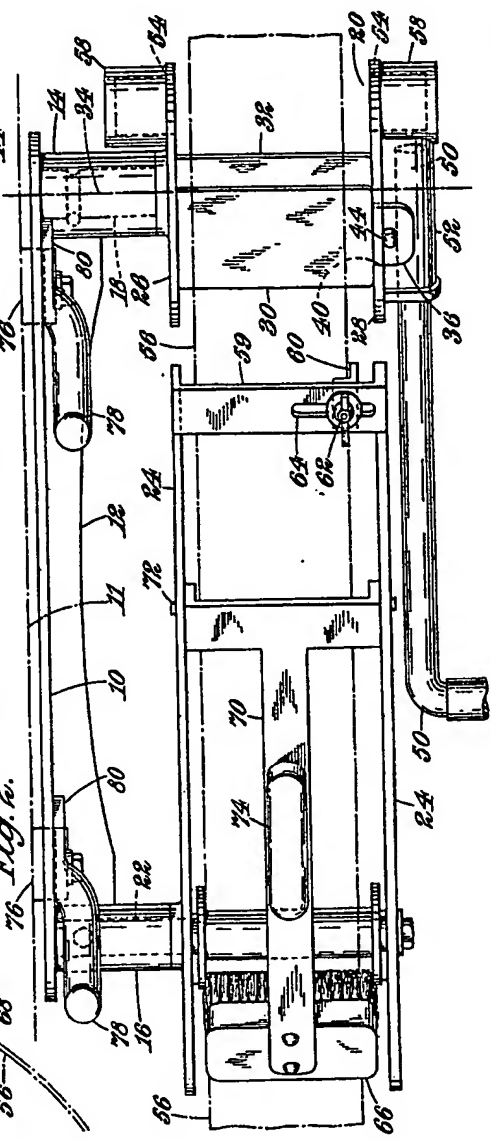


Fig. 2.



[This Drawing is a reproduction of the Original on a reduced scale.]